

REMARKS/ARGUMENTS

Claims 1-7, 10-13 and 15-25 are pending in the application. Upon entry of this amendment, claims 1, 3-7, 10-13, 15 and 20-21 have been amended. Claims 2 and 22-23 have been canceled. The amendments are supported by the specification and claims as originally filed. No new matter has been introduced into the application. As explained in more detail below, Applicants submits that all claims are in condition for allowance and respectfully requests such action.

Claim Objections

Claims 2, 22 and 23 were objected to as being of improper dependent form. In response, features of claims 2, 22 and 23 have been incorporated into claims 1, 20 and 21, from which they depend, respectively. Claims 2, 22 and 23 have been canceled, thus rendering the objection moot.

Rejection under 35 USC §112

Claims 1-7, 10-13 and 15-25 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite. Claims 1, 20 and 21 were alleged to be indefinite due to not complying with accepted US Patent practice with respect to Markush grouping of claim elements. The Applicants respectfully disagree. The Markush groups in claims 1, 20 and 21 each include only closed sets, and each recite an “and” in the groups, as expected. The claim set as filed with the Response and Amendment of July 9, 2007, is attached hereto with the appropriate Markush grouping language highlighted.

Claims 3-7 were rejected as indefinite and have been amended for clarification purposes. First, claims 3-7 were each amended to ultimately depend from independent claim 21, which is directed to a stable colored beverage. Second, claims 3-7 were each amended to delete the phrase, “sufficient to impart an amount of added color to a beverage.” For example, amended claim 3 now recites, “The stable colored beverage according to claim 21, wherein the synthetic color is present in an amount ranging from about 0.1 ppm to about 50 ppm.” The amendments

are supported at least by paragraphs [32] and [52] of the application as originally filed. The 35 U.S.C. 112 rejections are therefore respectfully requested to be withdrawn.

Rejection under 35 USC §102

Claims 1-7, 10-11, 15-18, and 20-25 were rejected under 35 U.S.C. 102(b) as being anticipated by JP 2001323263 to Akihiko et al. (“Akihiko”) as evidenced by ICS and Horn-Ross. The Applicant respectfully disagrees. Claims 2, 22 and 23 have been canceled, rendering the rejection moot with respect to those claims. Claims 1, 20 and 21 have been amended to delete riboflavin from the group from which the synthetic color is selected. Akihiko is directed to the use of coffee bean extracts to stabilize natural pigments, including riboflavin (See Abstract of Akihiko.) Riboflavin may be a natural pigment or a synthetically produced pigment, however, Akihiko is silent on any other synthetic colors. More specifically, Akihiko does not disclose at least the feature of the synthetic colors as recited in claims 1, 20 and 21, and thus cannot be considered to anticipate claims 1, 20 or 21. Claims 3-7, 10-11 and 15-18 depend from claim 1 and claims 24-25 depend from claim 21 and are patentable over Akihiko for the same reasons as claims 1 and 21 and for the additional features recited therein.

Rejection under 35 USC §103

Claims 12-13 and 18 were rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2001323263 to Akihiko et al. (“Akihiko”) in view of COFFEE: RELATED BEVERAGES (“COFFEE”) The Applicants respectfully traverse the rejection. Akihiko is discussed above with respect to amended independent claims 1, 20 and 21. Briefly, Akihiko does not disclose at least the synthetic colors as recited in amended claims 1, 20 and 21. Further, Akihiko discloses and states that because “only the antioxidizing effectiveness cannot necessarily explain fading prevention of natural coloring matter, there is no fading inhibitor generally applicable to any coloring matter.” (See paragraph [0006] of the translation of Akihiko) Akihiko therefore teaches that the mechanism to prevent color fading is unknown. The disclosure of Akihiko, therefore,

would not provide one of skill in the art a way to predict if coffee bean extract would be an effective fading inhibitor for any other colors, specifically the synthetic colors recited in the instant claims. Moreover, Akihiko discloses that the invention is not directed to “the effectiveness of each component independent in coffee beans,” but rather “as a result of examining many things paying attention to the activity by the complex synergism by various components in coffee beans.” (See paragraph [0008] of the translation of Akihiko) Consequently, Akihiko teaches away from the instant claims by stating that combinations of different components within the coffee bean extract work synergistically to provide the desired result, as opposed to compounds containing a particular base molecular structure, such as a C₆-C₃ phenylpropenoic carbonyl structure as recited in independent claims 1, 20 and 21.

On page 7 of the Office Action mailed 10/04/07, the following was contended:

“Since Akihiko et al disclose pigment fading inhibitor comprising coffee bean extract as an active ingredient, and since dandelion root and hawthorn were well known coffee substitutes, one of ordinary skill in the art would have been motivated to substitute one coffee material with another coffee material (dandelion or hawthorn) since beans, dandelion root and hawthorn were well known coffee substitutes.”

The Applications respectfully disagree. Although dandelion root and hawthorn have been substituted for coffee as a beverage there is simply no correlation between drinking coffee for refreshment and the use of a coffee bean extract to inhibit the color fading of riboflavin. More specifically, since Akihiko is silent regarding how coffee bean extract inhibits certain color fading, there is no way to compare the key characteristics of coffee bean extract to the components of coffee beverage substitutes such as dandelion root or hawthorn.

Further, COFFEE discloses that the coffee substitutes

“have been prepared from many other plants, mainly from their seeds and roots, which, like coffee beans, contain large amounts of carbohydrates, appreciable amounts of protein, and sometimes other compounds with physiological activity, but rarely caffeine. On roasting, these seeds and roots generally tend to take on a coffee-like colour and give a high percentage of water-soluble extract, which sometimes has a flavour similar to that of coffee.”

(See page 1 of COFFEE) There would have been no expectation by one of ordinary skill in the art that one or more of the carbohydrates, proteins or physiologically active compounds in coffee substitutes could have color inhibition effects. Similarly, there would have been no

reason to suppose that a plant might be substituted for coffee bean extract as a color inhibitor merely because, following roasting, its seeds or roots may have a coffee-like color or a water-soluble extract that tastes similar to coffee.

Neither Akihiko nor COFFEE, either alone or in combination, discloses at least the recited synthetic colors or further, provides motivation to stabilize the synthetic colors with the recited C₃-C₆ phenylpropenoic acid compounds, as claimed. Consequently, amended claim 1 is unobvious over Akihiko in view of COFFEE. Claims 12-13 and 18 depend from claim 1 and are patentable over Akihiko and COFFEE for the same reasons as claim 1 and for the additional features recited therein.

Claim 19 was rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2001323263 to Akihiko et al. ("Akihiko"). Claim 19 depends from independent claim 1, and Akihiko is discussed in detail above with respect to claim 1. Briefly, claim 1 is unobvious at least because Akihiko does not disclose the recited synthetic colors and there is no motivation to stabilize the synthetic colors with the recited botanically derived extracts. Akihiko discloses the use of coffee bean extract to inhibit natural pigment color fading, but does not provide a mechanism for how the stabilization may occur. There would consequently be no expectation of success for one of skill in the art to employ a botanically derived stabilizer with a synthetic color, thus claim 19 can not be considered obvious in view of the disclosure of Akihiko. Reconsideration and withdrawal of the 35 U.S.C. 103(a) rejections are respectfully requested.

CONCLUSION

All rejections having been addressed, applicant respectfully submits that the instant application is in condition for allowance, and respectfully solicits prompt notification of the same. Should the Examiner have any questions, the Examiner is invited to contact the undersigned at the number set forth below.

Appln. No.: 10/629,759
Response/Amendment dated: October 4, 2007
Response to Office Action dated December 17, 2007

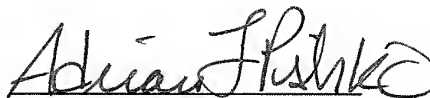
The Commissioner is hereby authorized to charge any fees due or credit any overpayment of fees to Deposit Account No. 19-0733.

Respectfully submitted,

BANNER & WITCOFF, LTD.

Dated: December 17, 2007

By:

A handwritten signature in dark ink, appearing to read "Adrian Pishko", written over a horizontal line.

Adrian L. Pishko
Reg. No. 57,800

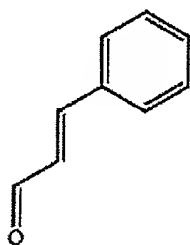
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This listing of claims will replace all prior versions, and listings, of claims in the application:

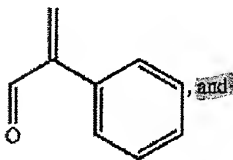
Listing of Claims:

1. (Currently Amended) A food coloring composition comprising

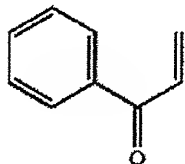
- (a) a synthetic color ~~selected from the group consisting of β -apo-8'-carotenal, canthaxanthin, β -carotene,~~ Citrus Red No. 2, D&C Red No. 28, D&C Yellow No. 10, FD&C Blue No. 1, FD&C Blue No. 2, FD&C Green No. 3, FD&C Red No. 3, FD&C Red No. 40, FD&C Yellow No. 5, FD&C Yellow No. 6, ferrous gluconate, orange B, riboflavin, ultramarine blue, ultramarine green, ultramarine violet and red, ~~and combinations thereof; and~~
- (b) a botanically derived color stabilizer containing a C₆-C₃ phenylpropenoic carbonyl structure therein represented by a formula ~~selected from the group consisting of~~



(Ia)



(Ib)



(Ic)

said botanically derived color stabilizer is ~~selected from the group consisting of~~
rosmarinic acid, chlorogenic acid, cichoric acid, caffeic acid, coumaric acid, cinnamic
acid, ferulic acid, sinapic acid, caftaric acid, eichloric acid, echinacoside ~~and~~
combinations thereof.

2. (Previously Presented) The food coloring composition according to claim 1, wherein said botanically derived color stabilizer is further selected from the group consisting of cinnamoyl esters, coumarins, chalcones, flavones, chromones, isoflavones, and combinations thereof.

3. (Original) The food coloring composition according to claim 1, wherein the synthetic color is present in an amount sufficient to impart an amount of added color to a beverage ranging from about 0.1 ppm to about 50 ppm.

4. (Original) The food coloring composition according to claim 3, wherein the synthetic color is present in an amount sufficient to impart an amount of added color to a beverage ranging from about 1 ppm to about 10 ppm.

5. (Original) The food coloring composition according to claim 1, wherein the botanically derived color stabilizer is present in an amount sufficient to provide an amount of botanically derived color stabilizer in a beverage ranging from about 10 to about 500 ppm.

6. (Original) The food coloring composition according to claim 5, wherein the botanically derived color stabilizer is present in an amount sufficient to provide an amount of botanically derived color stabilizer in a beverage ranging from about 50 ppm to about 300 ppm.

7. (Original) The food coloring composition according to claim 6, wherein the botanically derived color stabilizer is present in an amount sufficient to provide an amount of botanically derived color stabilizer in a beverage ranging from about 100 ppm to about 200 ppm.

8-9. (Canceled)

10. (Previously Presented) The food coloring composition according to claim 2, wherein the cinnamoyl ester is selected from the group consisting of cinnamyl formate, cinnamyl acetate, ethyl cinnamate, cinnamyl propionate, cinnamyl alpha-toluate, cinnamyl 2-amino benzoate, cinnamyl anthranilate, cinnamyl benzoate, cinnamyl beta-phenyl acrylate, cinnamyl butyrate, cinnamyl cinnamate, cinnamyl isobutyrate, cinnamyl isovalerate, cinnamyl methyl ketone, cinnamyl ortho-amino benzoate, cinnamyl phenyl acetate, cinnamyl 3-phenyl propenoate and combinations thereof.

11. (Previously Presented) The food coloring composition according to claim 2, wherein the coumarin is selected from the group consisting of coumarin, coumestrol, dalbergin, daphnetin, esculetin, citropten, noralbergin, umbelliferone, scopoletin, xanthotoxol, psoralen, bergapten, fraxetin and combinations thereof.

12. (Previously Presented) The food coloring composition according to claim 2, wherein the chalcone is selected from the group consisting of chalcone, polyhydroxychalcones, butein, phloridzin, echinatin, marein, isoliquiritigenin, phloretin and combinations thereof.

13. (Previously Presented) The food coloring composition according to claim 2, wherein the flavone is selected from the group consisting of rhoifolin, diosmin, apiin, apigenin, myricetin, kaempferol, luteolin, morin, neodiosmin, quercetin, rutin, balcalein, cupressuflavone, datiscetin, diosmetin, fisetin, galangin, gossypetin, geraldol, hinokiflavone, scutellarein, flavonol, primuletin, pratol, robinetin, quercetagenin, (OH).sub.4 flavone, tangeritin, sinensetin, fortunelin, kampferide, chrysoeriol, isorhamnetin, vitexin and combinations thereof.

14. (Canceled)

15. (Previously Presented) The food coloring composition according to claim 2, wherein the isoflavone is selected from the group consisting of daidzin, daidzein, biochamin A, prunetin, genistin, glycitein, glycitin, genistein, 6,7,4'-tri(OH)isoflavone, 7,3',4'-tri(OH)isoflavone and combinations thereof.

16. (Original) The food coloring composition according to claim 1, wherein the botanically derived color stabilizer is supplied by an extract of a botanical.

17. (Original) The food coloring composition according to claim 16, wherein the extract is selected from the group consisting of rosemary extract, green coffee bean extract, blueberry extract, rhododendron extract, sunflower kernel extract, chickory leaf extract, purple coneflower extract, lettuce extract and combinations thereof.

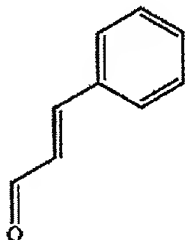
18. (Original) The food coloring composition according to claim 16, wherein the extract is selected from the group consisting of horse chestnut extract, dandelion extract, eucalyptus extract, stringybark extract, saw palmetto extract, honeysuckle extract, hawthorn extract, noni fruit extract, red clover extract, orange extract, buckwheat extract, chamomile extract and combinations thereof.

19. (Original) The food coloring composition according to claim 1 further comprising a non-aryl enoic carbonyl compound selected from the group consisting of sorbic acid, aconitic acid, fumaric acid, maleic acid and combinations thereof.

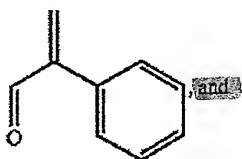
20. (Currently Amended) A method of preventing color fading in a synthetically colored beverage comprising the step of including in said beverage

- (a) a synthetic color selected from the group consisting of Citrus Red No. 2, D&C Red No. 28, D&C Yellow No. 10, FD&C Blue No. 1, FD&C Blue No. 2, FD&C Green No. 3, FD&C Red No. 3, FD&C Red No. 40, FD&C Yellow No. 5, FD&C Yellow No. 6, ferrous gluconate, orange B, riboflavin, ultramarine blue, ultramarine green, ultramarine violet and red, and combinations thereof; and
- (b) a color stabilizing amount of a botanically derived color stabilizer containing a C₆-C₃ phenylpropenoic carbonyl structure therein represented by a formula selected from the group consisting of

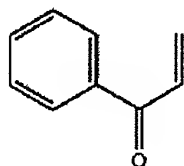
(1a)



(1b)



(1c)

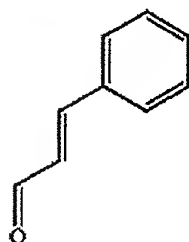


said botanically derived color stabilizer is ~~selected from the group consisting of~~ rosmarinic acid, chlorogenic acid, cichoric acid, caffeic acid, coumaric acid, cinnamic acid, ferulic acid, sinapic acid, caftaric acid, eichloric acid, echinacoside ~~and~~ combinations thereof.

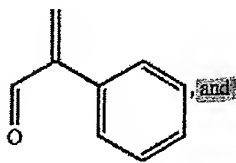
21. (Currently Amended) A stable colored beverage comprising,

- (a) a synthetic color ~~selected from the group consisting of~~ β -Apo-8'-carotenal, ~~canthaxanthin, β -carotene,~~ Citrus Red No. 2, D&C Red No. 28, D&C Yellow No. 10, FD&C Blue No. 1, FD&C Blue No. 2, FD&C Green No. 3, FD&C Red No. 3, FD&C Red No. 40, FD&C Yellow No. 5, FD&C Yellow No. 6, ferrous gluconate, orange B, riboflavin, ultramarine blue, ultramarine green, ultramarine violet and red, ~~and~~ combinations thereof; and

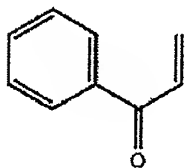
- (b) a color stabilizing amount of a botanically derived color stabilizer containing a C₆-C₃ phenylpropenoic carbonyl structure therein represented by a formula selected from the group consisting of



(Ia)



(Ib)



(Ic)

said botanically derived color stabilizer is selected from the group consisting of rosmarinic acid, chlorogenic acid, cichoric acid, caffeic acid, coumaric acid, cinnamic acid, ferulic acid, sinapic acid, caftaric acid, eichloric acid, echinacoside and combinations thereof.

22. (Previously Presented) The method of preventing color fading in a synthetically colored beverage according to claim 20, wherein said botanically derived color stabilizer is further selected from the group consisting of cinnamoyl esters, coumarins, chalcones, flavones, chromones, isoflavones, and combinations thereof.

23. (Previously Presented) The stable colored beverage according to claim 21, wherein said botanically derived color stabilizer is further selected from the group consisting of cinnamoyl esters, coumarins, chalcones, flavones, chromones, isoflavones, and combinations thereof.

24. (Currently Amended) The stable colored beverage according to claim 21, wherein the stable colored beverage is a lemonade, the synthetic color is FD&C Yellow No. 5, and the botanically derived color stabilizer is chlorogenic acid from green coffee bean extract.

25. (Currently Amended) The stable colored beverage according to claim 21, wherein the stable colored beverage is a lemonade, the synthetic color is FD&C Yellow No. 6, and the botanically derived color stabilizer is chlorogenic acid from green coffee bean extract.